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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,187	03/17/2005	Byung-Woo Bae	P27593	6691

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EXAMINER	
SALZMAN, KOURTNEY R	
ART UNIT	PAPER NUMBER
1795	

NOTIFICATION DATE	DELIVERY MODE
04/18/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary	Application No.	Applicant(s)	
	10/528,187	BAE ET AL.	
	Examiner	Art Unit	
	KOURTNEY R. SALZMAN	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *July 8, 2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Summary

1. This is the first Office Action on the merits for application 10/205,187, filed March 17, 2005, the 371 national stage application of PCT/KR02/01853. Foreign priority is claimed to Korean patent document 2002/59612, filed September 30, 2002.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over NANKAI et al (US 5,120,420), in view of IKETAKI et al (US 6,576,117).

Regarding claim 1, NANKAI et al teaches the application of a current or voltage to a working electrode where the reading level is the concentration of the interest. (c. 5, l. 46-53) NANKAI et al teaches a biosensor comprising multiple measuring electrodes, shown in figure 13 as reference numbers 41-42, functioning as working electrodes. The concentrations read by the electrodes are averaged for a mean value. (c. 8, l. 42-45)

NANKAI et al fails to teach the use of applying the voltage current to the electrodes multiple times sequentially.

IKETAKI et al teaches a method for using an electrochemical sensor through application of voltage to an electrode twice consecutively, as shown in figure 1. As shown in figure 2, reference box 2, the output parameters of the sensor, or in the case of the instant application the parameters as measured as the average of the sensor reading is analyzed and can be reported without correction or as an off-value.

At the time of invention, it would have been obvious to one of ordinary skill in the art to perform the readings of the two electrode system as disclosed in NANKAI et al, two times, as shown in IKETAKI et al because both apparatus use multiple

either electrodes or runs to minimize error, in turn, providing a measurement with higher accuracy (NANKAI et al c.8, l. 42-45 and IKETAKI et al c. 3, l. 2-4)

Regarding claim 2, NANKAI et al teaches the delivery of a pulse and monitoring for time between when a sample is delivered and when the detector notices differences in voltage. (c. 11, l. 16-26) Therefore, if the sample is never detected (in that the sensor never reads a voltage difference) it is obvious that the sensor worked in error.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over BEATY et al(US 6,645,368), in view of NANKAI et al (US 5,120,420) and IKETAKI et al (US 6,576,117).

BEATY et al teaches a sensor and method of using the sensor which employs amplifiers and switches to measure biological material. The noninverting (+) terminal, or input of the operational amplifier connects to a power supply as stated in c. 8, l. 46-48. The inverting (–) terminal, or output of the operational amplifier connects to multiple switches or terminal (c. 8, l. 32-38) which output "DC excitation" "across the biosensor". (c. 8, l. 36-38) The microprocessor, or instrument 32 of BEATY et al, more specifically the microprocessor unit inside the instrument 54, is connected to the circuit of switches of 36, as shown in figure 2. The microprocessor is equipped to handle the calculations of concentrations of components with corrections (c. 8, l. 15-30) and extensive equations including those shown in column 9, line 35-column 10, line 10. BEATY et al describes the

process of measuring concentrations using the apparatus described in column 10, lines 49. BEATY et al states the instrument 32 contains a display for the communication of a result in column 10, line 46-48.

While the microprocessor of BEATY et al is capable of calculating complicated functions, it does not explicitly state the use of the microprocessor to average readings from multiple electrodes or the use of multiple pulses.

Regarding claim 1, NANKAI et al teaches the application of a current or voltage to a working electrode where the reading level is the concentration of the interest. (c. 5, l. 46-53) NANKAI et al teaches a biosensor comprising multiple measuring electrodes, shown in figure 13 as reference numbers 41-42, functioning as working electrodes. The concentrations read by the electrodes are averaged for a mean value. (c. 8, l. 42-45)

NANKAI et al fails to teach the use of applying the voltage current to the electrodes multiple times sequentially.

IKETAKI et al teaches a method for using an electrochemical sensor through application of voltage to an electrode twice consecutively, as shown in figure 1. As shown in figure 2, reference box 2, the output parameters of the sensor, or in the case of the instant application the parameters as measured as the average of

the sensor reading is analyzed and can be reported without correction or as an off-value.

It would be obvious to one of ordinary skill in the art to use the analyzation apparatus of BEATY et al to perform the method disclosed by NANKAI et al and IKETAKI et al because BEATY et al recognizes that just the use of an appropriate biosensor is not enough for a completely accurate reading, but instead the combination of the electronic analysis method and the accurate sensor. (c. 5, l. 44-48) Also, BEATY et al uses simply the generic term biosensor, making it an obvious step to apply the electrical analysis disclosed to the biosensor as described by NANKAI et al and IKETAKI et al. At the time of invention, it would have been obvious to one of ordinary skill in the art to perform the readings of the two electrode system as disclosed in NANKAI et al, two times, as shown in IKETAKI et al because both apparatus use multiple either electrodes or runs to minimize error, in turn, providing a measurement with higher accuracy (NANKAI et al c.8, l. 42-45 and IKETAKI et al c. 3, l. 2-4)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KOURTNEY R. SALZMAN whose telephone number is (571)270-5117. The examiner can normally be reached on Monday to Thursday 6:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nam X Nguyen/
Supervisory Patent Examiner, Art Unit 1753

krs
4/10/2008